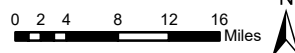




Legend



Dredge footprint



SHEET 1
VICINITY MAP

Dunlap Towing Wood Waste Removal
Budd Inlet, Olympia, WA

Reference Number: (USACE to provide)

Applicant Name: Michael Harlan

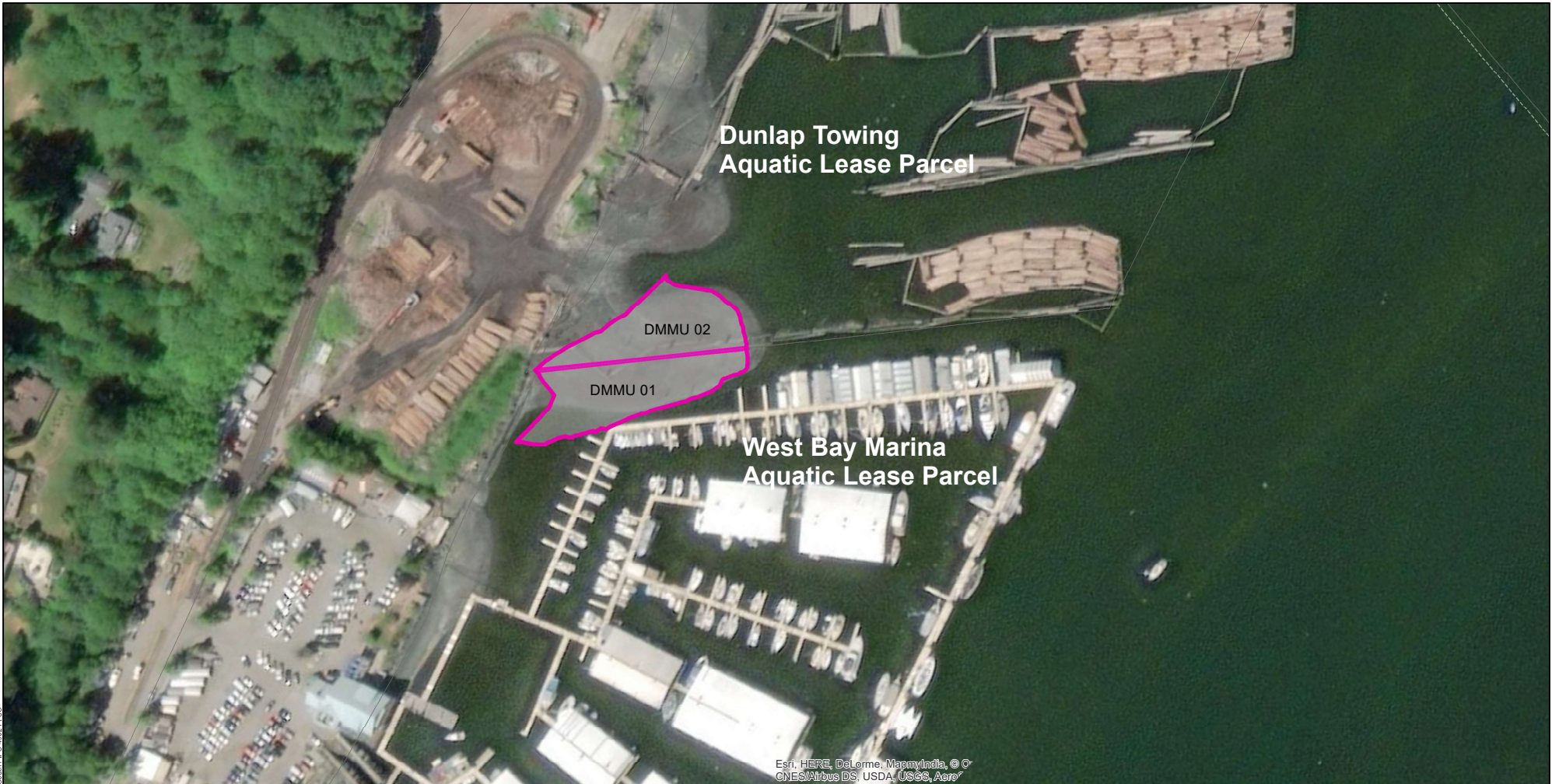
Proposed Project: Dunlap Towing Wood Waste Removal

Location: S8/T18/R2W, Parcel: 09750016000



Date: October 2018



SHEET 2

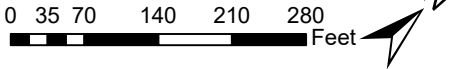


Legend

-  Dredge Area
-  DMMU Boundaries

Dredging Geometry

Footprint Area (sq ft): 30522
Footprint Area (acre): 0.7



GRAVITY
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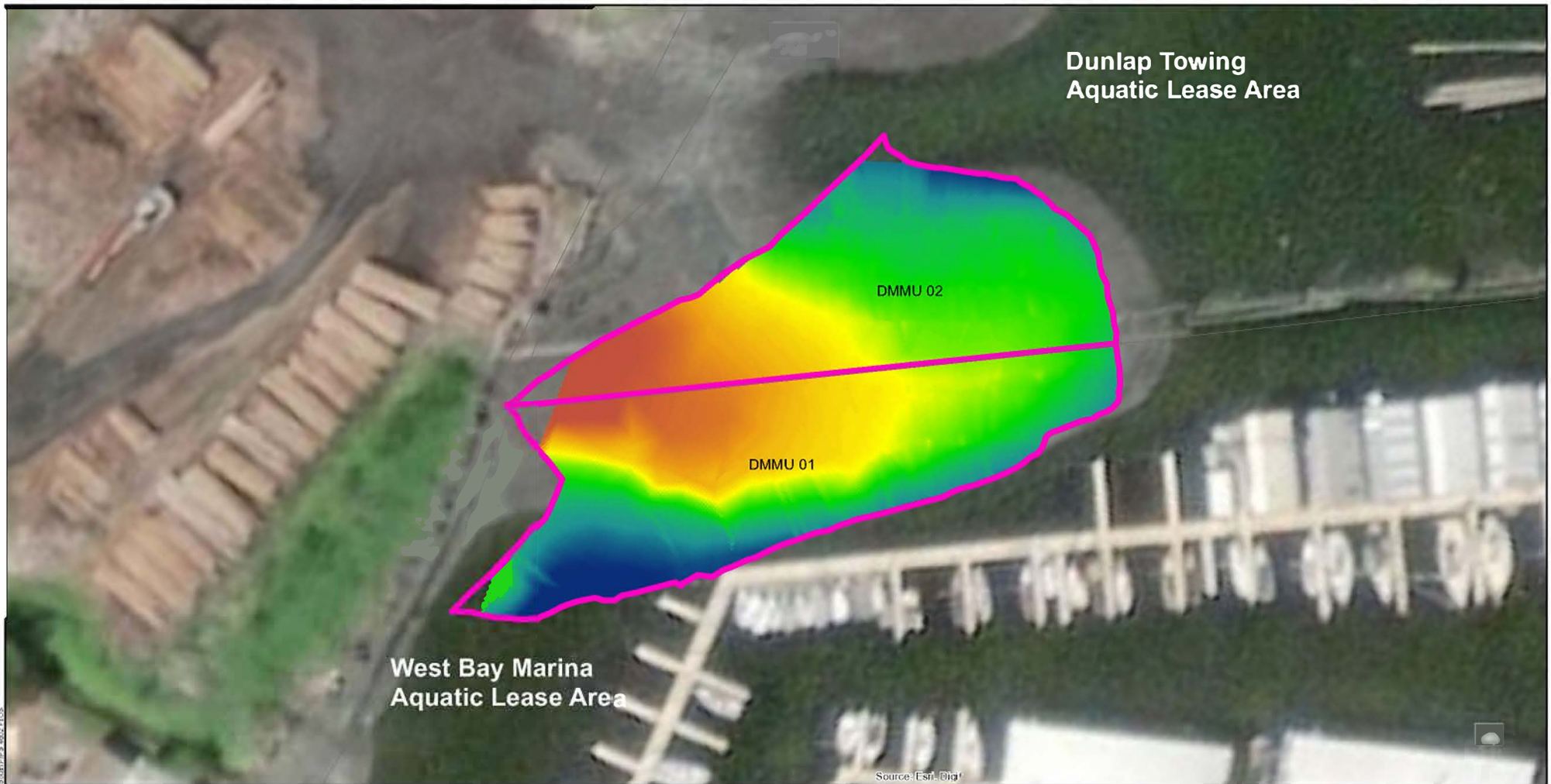


SHEET 2
DREDGE POLYGON PLAN VIEW
Dunlap Towing Wood Waste Removal
Budd Inlet, Olympia, WA

Reference Number: (USACE to provide)
Applicant Name: Michael Harlan
Proposed Project: Dunlap Towing Wood Waste Removal
Location: S8/T18/R2W, Parcel: 09750016000

Date: October 2018

SHEET 3



Legend

 DMMU Boundaries

Dredge Cut Depth (ft)

Value

High : 14.5

Low : 0.70

Dredging Geometry

Footprint Area (sq ft): 30522
Footprint Area (acre): 0.7

0 10 20 40 60 80 Feet



SHEET 3

DREDGE CUT DEPTH ISOPATCH

Dunlap Towing Wood Waste Removal
Budd Inlet, Olympia, WA

Reference Number: (USACE to provide)

Applicant Name: Michael Harlan

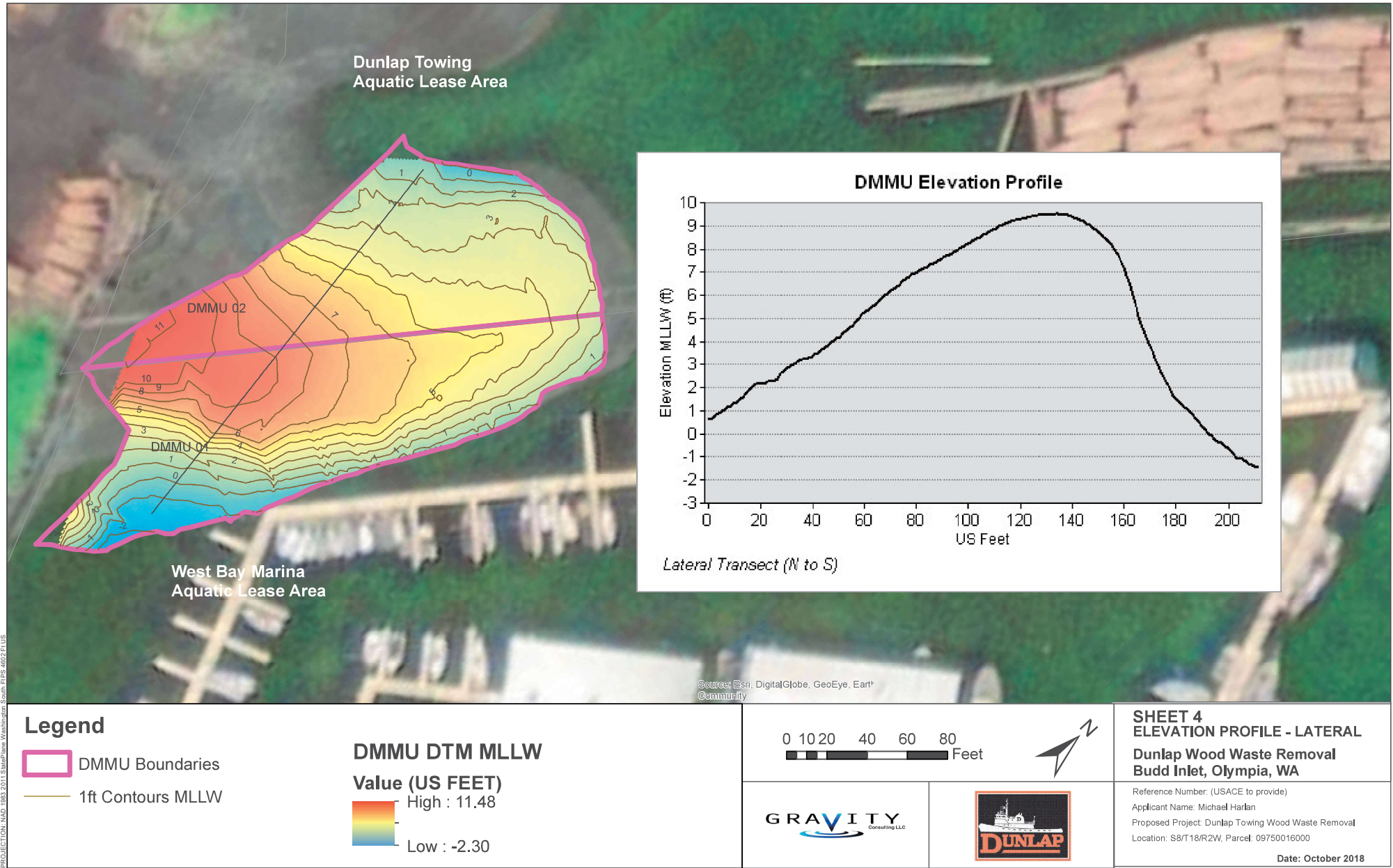
Proposed Project: Dunlap Towing Wood Waste Removal
Location: S8/T18/R2W, Parcel: 09750016000

Date: November 2018

GRAVITY



SHEET 4

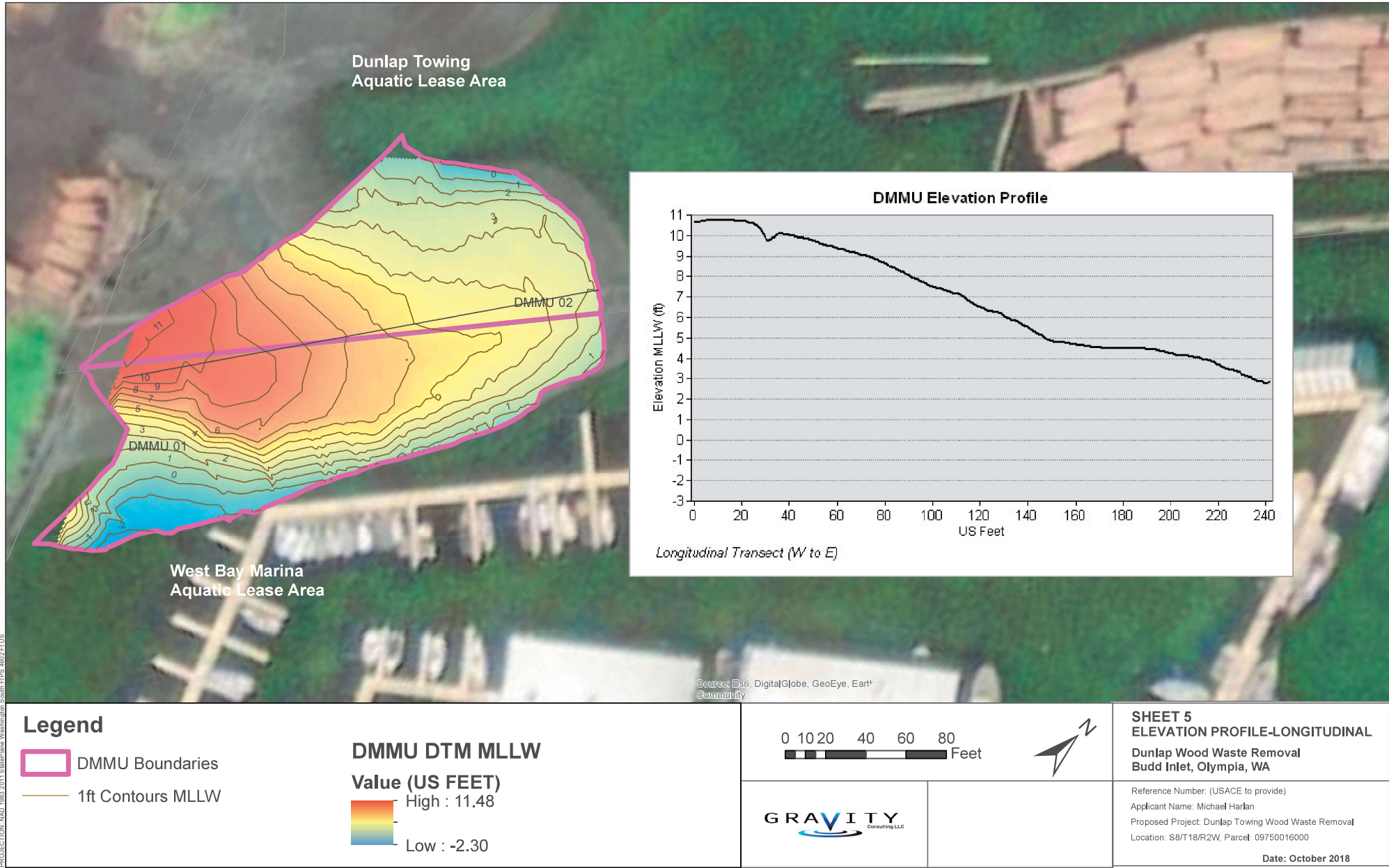


PROJECTION: NAD_1983_2011 StatePlane Washington South FIPS 4602 FUS

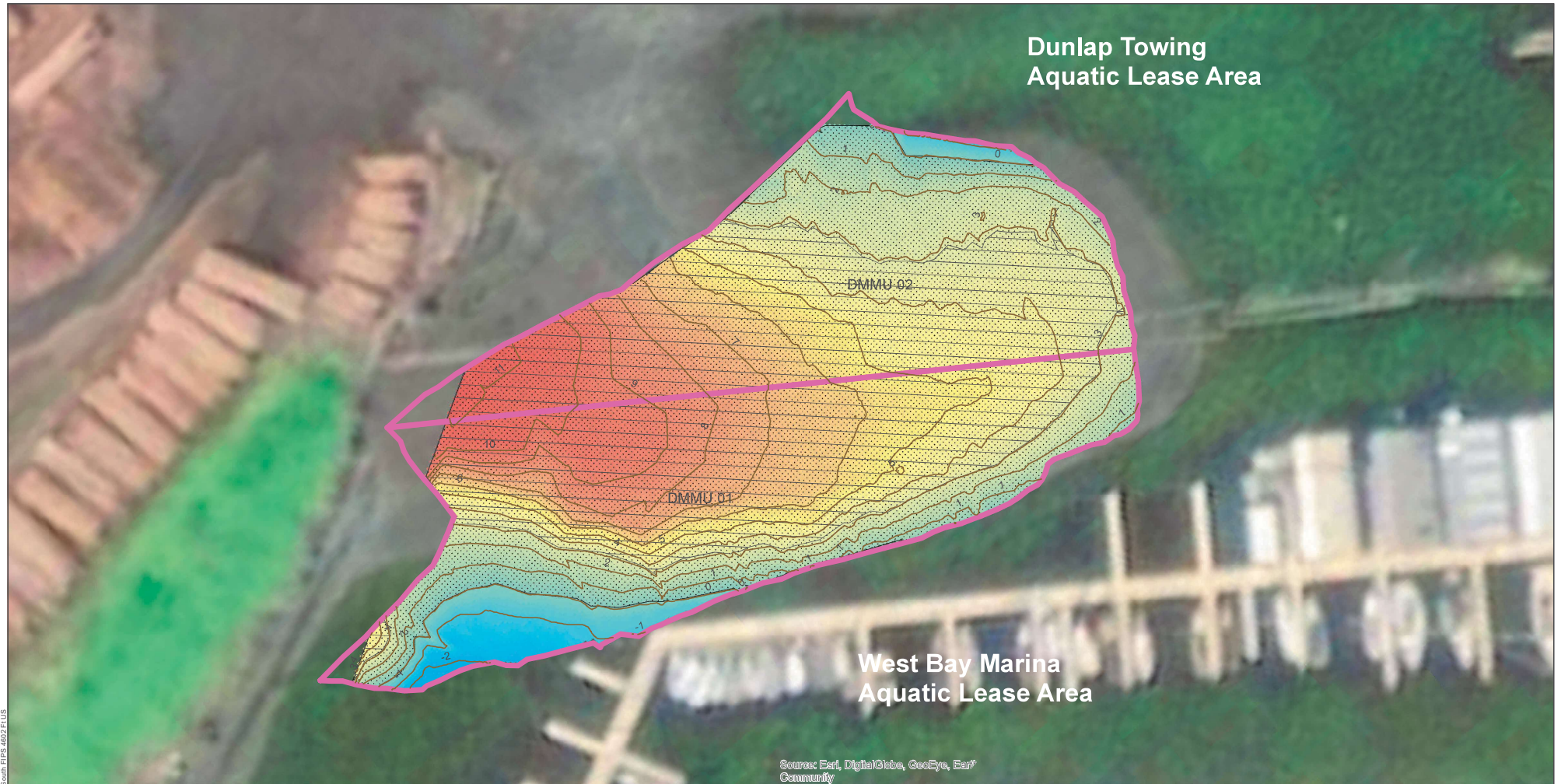
SOURCE: (C) 2010 Microsoft Corporation and its data suppliers, WBCAS

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SHEET 5



SHEET 6



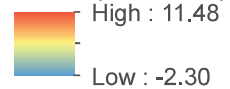
Source: Esri, DigitalGlobe, GeoEye, Earth
Community

Legend

-  Area Above MLW (3.08 ft MLLW)
-  Area Above MLLW (0 ft)
-  DMMU Boundaries
-  1ft Contours MLLW

DMMU DTM MLLW

Value (US FEET)



DMMU Tidal Exposure

MLLW: 27621 sqft/ 90% DMMU
 MHV: 19358 sqft/ 63% DMMU
 MHW: 0 sq ft/ 0% DMMU
 MHHW: 0 sqft/ 0% DMMU



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SHEET 6

DREDGE POLYGON TIDAL ELEVATIONS
 Dunlap Towing Wood Waste Removal
 Budd Inlet, Olympia, WA

Reference Number: (USACE to provide)
 Applicant Name: Michael Harlan
 Proposed Project: Dunlap Towing Wood Waste Removal
 Location: S8/T18/R2W, Parcel: 09750016000






Date: October 2018

SHEET 7



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the G.

Legend

-  Area Above MLW (3.08 ft MLLW)
-  Area Above MLLW (0 ft)
-  Stormwater Pipe (approx)
-  DMMU Boundaries
-  1ft Contours MLLW

0 20 40 80 120 160 Feet



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SHEET 7

MATERIAL HANDLING AREA
Dunlap Towing Wood Waste Removal
Budd Inlet, Olympia, WA

Reference Number: (USACE to provide)
Applicant Name: Michael Harlan
Proposed Project: Dunlap Towing Wood Waste Removal
Location: S8/T18/R2W, Parcel: 09750016000



Date: October 2018

641600 1038000 641400 1038400 641200 1038800 641000 1039200 640800 1039600 640600 1040000

SHEET 8



Legend

-  Approximate wetland boundary
-  DMMU

*NOTE: wetland boundaries displayed on this drawing are not to scale and not representative of accurate area of wetlands. Areas depicted here are from visual observations only, and no delineation was performed to define actual boundaries of wetlands. This figure should be used for internal planning purposes only, and no further analyses should be performed with the data represented here.

0 25 50 100 150 200 Feet



GRAVITY

DUNLAP
TOWING COMPANY

SHEET 8
WETLAND/DRAINAGE OBSERVATIONS

Dunlap Towing Wood Waste Removal
Budd Inlet, Olympia, WA

Reference Number: (USACE to provide)
Applicant Name: Michael Harlan
Proposed Project: Dunlap Towing Wood Waste Removal
Location: S8/T18N/R2W, Parcel: 09750016000






Date: October 2018

SHEET 9



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, Aero
Community

Legend

-  Piling
-  DMMU
-  Concrete Bulkhead
-  Log Boom
-  Piling Cluster

0 25 50 100 150 200 Feet 

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SHEET 9 EXISTING MARINE STRUCTURES

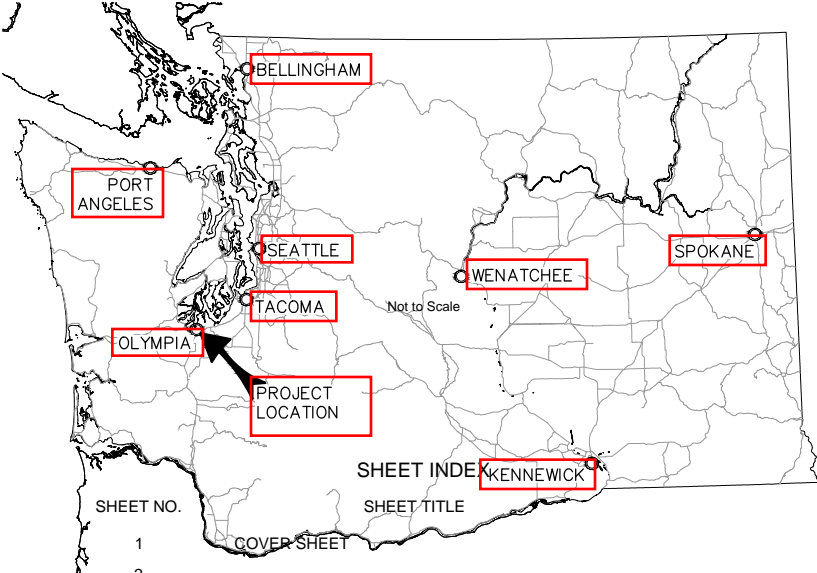
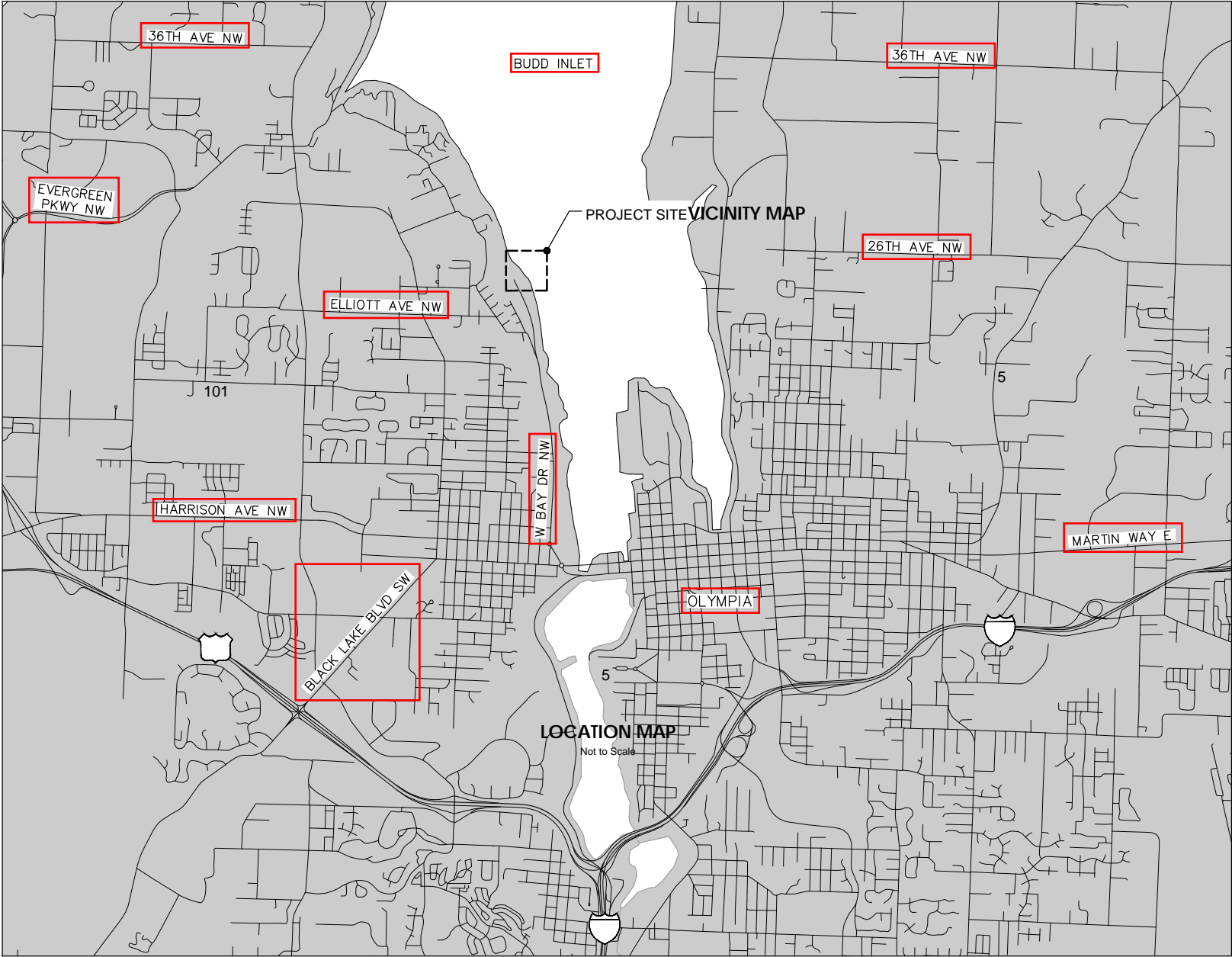
Dunlap Wood Waste Removal
Budd Inlet, Olympia, WA

Reference Number: (USACE to provide)
Applicant Name: Michael Harlan
Proposed Project: Dunlap Towing Wood Waste Removal
Location: S8/T18N/R2W, Parcel: 09750016000

Date: October 2018

SEDIMENT REMOVAL DUNLAP TOWING

OLYMPIA, WASHINGTON



SHEET NO.	SHEET TITLE
1	COVER SHEET
2	
3	EXISTING CONDITIONS SITE PLAN
4	SITE CONSTRAINTS
5	SEDIMENT HANDLING AREA
6	TEMPORARY EROSION AND SEDIMENTATION CONTROL PLAN
7	TESC DETAILS
8	DREDGE PLAN
9	TYPICAL DREDGE CROSS-SECTION

	GENERAL NOTES

DRAFT

Rev	Date	Description	By

Client
GRAVITY

CRETE
CONSULTING, INC.
Designer M. Byers
Drafter C. Taylor
Checker Value
Reviewer Value

Scale As Noted
SCALE WARNING
Drawing is not to scale, if scale bar
doesn't measure one inch

Sheet 1 of 9
Sediment Removal
Dunlap Towing
Olympia, Washington
Cover Sheet

GENERAL NOTES

GENERAL NOTES


DRAFT

Sediment Removal
Dunlap Towing
Olympia, Washington
General Notes

Designer	M. Byers
Drafter	C. Taylor
Checker	Value
Reviewer	Value

Scale As Noted

SCALE WARNING
Drawing is not to scale. If scale bar
doesn't measure one inch



Rev	Date	Description	By

Client



EXISTING SITE PLAN
SCALE IN FEET

DRAFT

Rev	Date	Description	By

GRAVITY

CRETE
CONSULTING, INC.

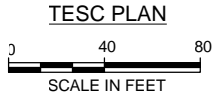
Scale As Noted

SCALE WARNING
Drawing is not to scale. If scale bar doesn't measure one inch

Designer M. Byers
Drafter C. Taylor
Checker Value
Reviewer Value

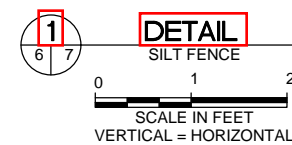
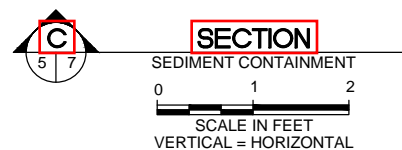
Sediment Removal
Dunlap Towing
Olympia, Washington
Existing Conditions
Site Plan

Sheet 3 of 9



DRAFT

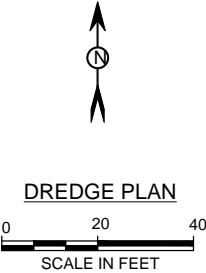
Sediment Removal Dunlap Towing Olympia, Washington Temporary Erosion and Sedimentation Control Plan	By				
	Description				
	Date				
	Rev				
Client					
GRAVITY					
CRETE CONSULTING, INC.					
Scale 1"=40'					
SCALE WARNING Drawing is not to scale. If scale bar doesn't measure one inch					
Designer M. Byers					
Drafter C. Taylor					
Checker Value					
Reviewer Value					
Sheet 6 of 9					



<p>Sediment Removal Dunlap Iowing Olympia, Washington</p> <p>TESC Details</p>	<p>Scale As Noted</p> <p>SCALE WARNING: Drawing is not to scale. If scale doesn't measure one inch</p> 	<p>Designer M. Byers</p> <p>Drafter C. Taylor</p> <p>Checker Value</p> <p>Reviewer Value</p>		<p>Client</p> 	<table border="1"> <thead> <tr> <th>Rev</th> <th>Date</th> <th>Description</th> <th>By</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Rev	Date	Description	By																				
	Rev	Date	Description	By																									
<p>Sheet 7 of 9</p>																													

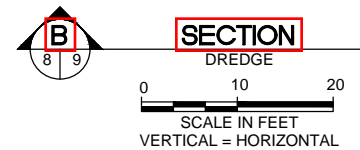
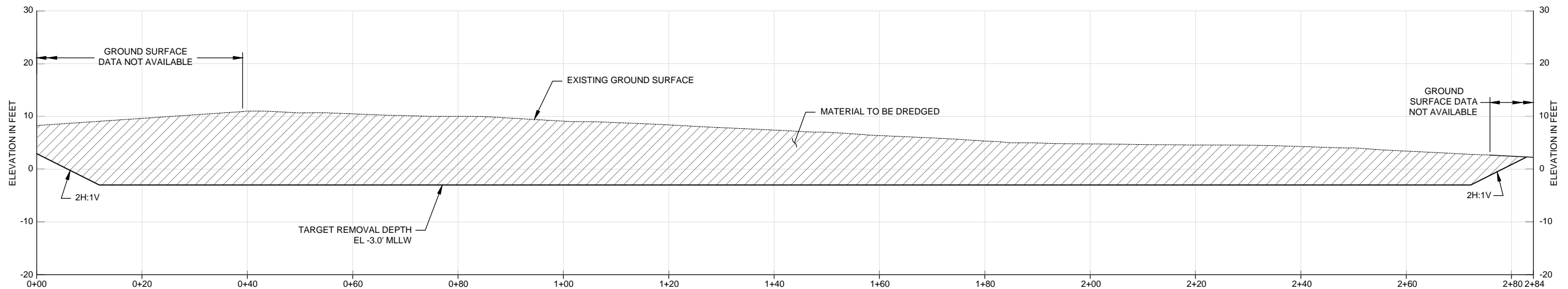
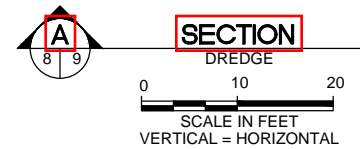
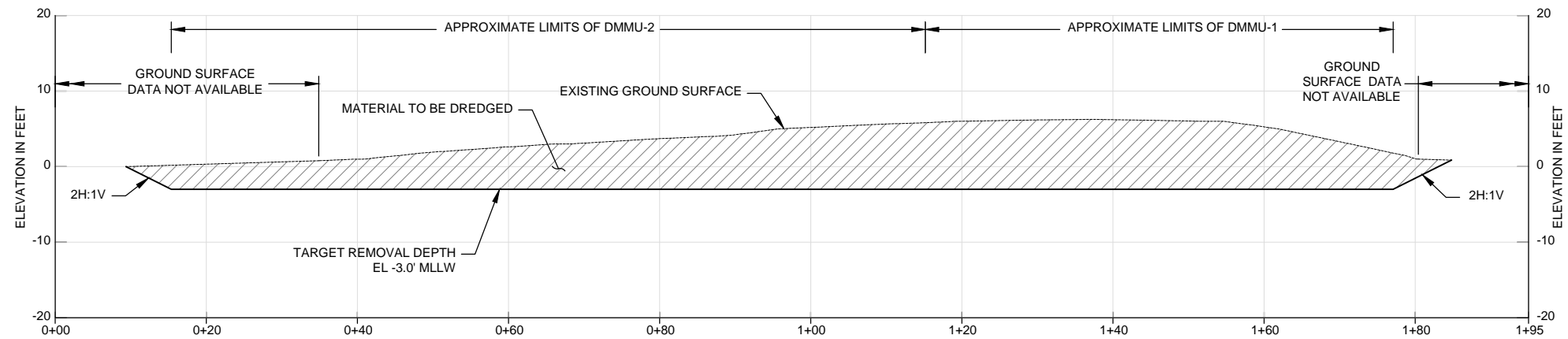


- LEGEND**
- 10 — EXISTING BATHYMETRY CONTOURS
 - EXISTING WOOD PILES (TO BE REMOVED FROM DMMU BOUNDARIES)



DRAFT

Client	GRAVITY			
	Rev	Date	Description	By
CRETE CONSULTING, INC.				
Sediment Removal Dunlap Towing Olympia, Washington				
Dredge Plan				
Sheet 8 of 9				



By					
Description					
Date					
Rev					



Scale	1"=10'
-------	--------

SCALE WARNING
Drawing is not to scale, if scale bar
doesn't measure one inch

Designer	M. Byers
Drafter	C. Taylor
Checker	Value
Reviewer	Value

Sediment Removal Dunlap Towing Olympia, Washington Typical Dredge Cross-Section
Sheet 9 of 9

DRAFT